1) $x^2 + 4x - 32$ (A) (M)

$(x+8)(x-4)$

2) $3x^2 - 3x - 90$

$3(x^2 - x - 30)$

$3(x-6)(x+5)$

$3x^2 - 3x - 90$

$3x^2 - 18x + 15x - 90$

$3x(x-6) + 15(x-6)$

$(x-6)(3x+15)$

$3(x-6)(x+5)$

$ac = -270$

$b = -3$

5) $24x^2y + 34xy + 12y$

$2y(12x^2 + 17x + 6)$

$ac = 72$

$b = 17$

$12x^2 + 8x + 9x + 6$

$4x(3x+2) + 3(3x+2)$

$2y(3x+2)(4x+3)$

8) $24x^2 - 6xy - 9y^2$

$3(8x^2 - 2xy - 3y^2)$

$ac = -24$

$b = -2$

$8x^2 - 6xy \mid +4xy - 3y^2$

$2x(4x-3y) \mid +y(4x-3y)$

$3(4x-3y)(2x+y)$